

that the Salt river valley will, when developed, rival the far-famed Fresno district of California in the production of deciduous fruits, as well as in the production of grapes and melons, and that the Higley district on account of the character of its soil, its railroad facilities, and its dependable supply of water, will rank among the



R. L. Thiebaud Orchard— $2\frac{1}{2}$ years old first. We have what seems to be an inexhaustible supply of underground water that is being successfully pumped for irrigation purposes throughout the district, and this underground supply of good pure water is more reliable and dependable than that from the clouds in most countries depending upon the natural rainfall.—R. L. Thiebaud, Buena Vista Ranch, Higley, Arizona.

In May, 1914, I completed the installation of my 30 horsepower pumping plant. Since this time I have successfully grown different crops of cowpeas, barley, milo maize, wheat and vegetables. I have a nice flock of hens now and intend making a hog ranch out of my 160 acre place in the near future. Am now preparing my first 10 acres of land for alfalfa for pasture.

My experience proves to me that the growing of annual crops such as I have raised is profitable under a pumping plant system of irrigation.—R. O. Myers.

Higley furnishes ideal conditions for the production of hogs. The climate permits a continuous cropping season for hog pasture, enabling the farmer to secure two litters of pigs per year. Litters dropped in October hog down rye and barley in July and August, thus finishing them for market when about eight months old. Litters dropped in March hog down cowpeas, peanuts, kafir and milo. Alfalfa furnishes pasture for about eight months in the year and is one of the best forage crops known for hogs. Brood sows between the periods of gestation need no other feed. Alfalfa, when marketed through the hog route, brings \$14 per ton.

Hog cholera has never been known in Higley and there exists a steady demand for hog products. The hog

makes the orchard, dairy and general farm more profitable.

I have lived in Higley four years, keeping hogs only experimentally until this year when we started the season with about twenty; have sold some and now have about eighty, little and big. Have made a little money on the few handled and am satisfied with the prospect for future profits.

I have seven acres of peaches and



Hogs

apricots, all young but growing splendidly. This year I had 20 acres of wheat that with a single irrigation produced $10\frac{1}{2}$ sacks to the acre. Last year I picked four bales of cotton from six acres.—P. B. Werdon.

Higley has not overlooked the hen. We keep hens to a profit and purpose, specializing on poultry. One acre of alfalfa and free range around it has given ample support to our flocks, together with the usual feeding. "Room"



Sunnyside

for chickens is not a problem in Higley and every condition, including market, is favorable to the industry. Our few hundred fowls have made us money and as soon as our conditions warrant it we will have at least 1,000.
—Mrs. John Beal, Sunnyside Ranch.

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After having carefully observed the development of southern California for fifteen years and seeing the phenomenal progress made there, it illustrates to my mind, in a way, what can be done right here. This valley has soil equal to any of



Sudan Grass, grown without Irrigation California, it has beneath it an inexhaustible supply of splendid water both for domestic and irrigation purposes and the natural condition of the surface is such that but very little time and expense, compared with other sections, is required to prepare it for cultivation and irrigation. The above cut is a photographic view of a field of sudan grass, grown by myself, without irrigation, on land cleared in January (this year, 1915), seed sown March 20, and harvested June 26. On land adjoining this and cleared at the same time, I have grown successfully, melons, corn, potatoes and all kinds of garden truck, with irrigation. I also have three hundred and twelve fruit trees that have made a wonderful growth for the first year.—M. D. Thiebaud, owner of The Oasis.

Higley, Ariz., Nov. 1, 1915.

My pumping plant is small, having a capacity of 50 gallons per minute, forcing me to confine my area of irrigated land to a few acres, and to the cultivation of vegetables, melons and nursery.

I have successfully grown with a pumping plant of 50 gallons capacity per minute, and found ready sale for vegetables, melons and nursery, and have demonstrated beyond doubt that anyone with the means to develop water from our underground flow, can in a few years surround himself with a beautiful home and productive fields of profitable crops. That we can pump water cheaply is no longer a question.

Our soil certainly cannot be excelled by any locality in the valley, and being on the main line of the Arizona Eastern railroad, our shipping facilities are excellent.

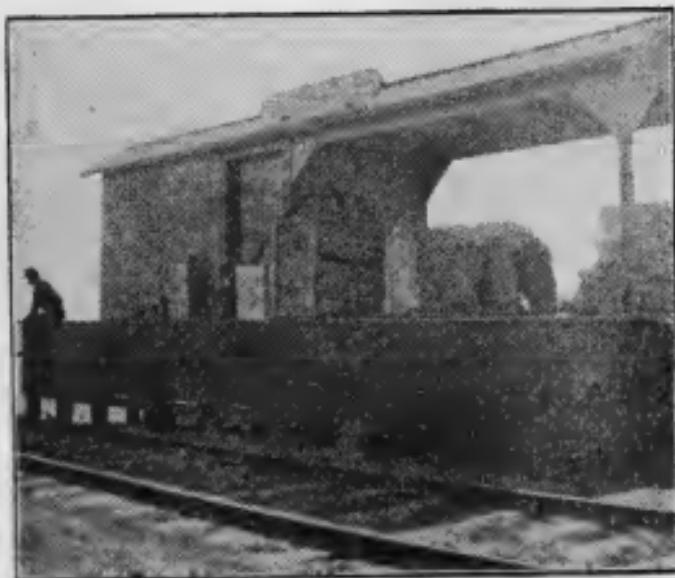
Those of small means, and necessarily small plants, can by proper management, I think, do well here with poultry, especially turkeys.

Small grain—wheat and barley—can be grown without irrigation during favorable seasons, and need not be sown until after the rains come and the ground is sufficiently soaked to insure a crop.—B. M. Crenshaw.

EAST CHANDLER WATER USERS.

A part of the landowners of lands lying southwest of Higley, which is also southeast of Chandler, have organized and incorporated a company known as the East Chandler Water Users' Association for the purpose of irrigating their lands from large pumping plants along the lines of the latest and most improved methods. One of their plants will, when installed, deliver 3600 gallons of water per minute and will irrigate 1000 acres of land. This takes the operation of the plant out of the hands of the farmer and places it in the hands of experts, which insures steady operation and economy in every way. It also enables the land owner to secure his water for the least possible cost of installation, as well as operation and maintenance, installation cost being less than \$15.00 per acre. Under this system water is as cheap as gravity water; hence the pumping plant farmer competes with the gravity water farmer in the raising of all annual crops and has many advantages over him in the production of all fruits and vegetables, as well as being able to apply his water to the annual crops to much better advantage. The business of the association is managed by a board of seven directors, of which H. C. Meyers is president and Guy Tyler secretary. The

company is cooperative, hence all its directors are landowners within their project. Contracts for the first large units have been let, others will soon follow and it is expected that the



Higley Freight Depot

first of these plants will be delivering water before January 1, 1916.—Guy Tyler, Secretary.

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The development of our land has just begun, so we have many acres still in their natural condition awaiting the intelligent farmer's efforts to reduce them to productive fields.

Raw titled lands can be bought at very reasonable prices, ranging from \$15.00 an acre to \$65.00. Improved lands sell much higher, some even running as high as \$150.00 per acre, while other land sells at \$50.00.

The difference in prices is caused

by the same conditions that enter into the value of lands in any other country, namely, improvements and location.

If the purchaser has only a small amount of means at his command and buys raw land, he should provide himself with at least a 3 horsepower pumping plant, which would furnish water enough to raise considerable garden and fruit and an acre of alfalfa.

By proper management he could keep 500 chickens, a horse, a cow and a few hogs, which would make him an ideal home and a nice income. His bank account would show a nice increase every year. If he has more means at his command his field of labor and development is unlimited.

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The picture of the threshing outfit herewith exhibited is my new Case machine, with which I made the season's run around Higley. There were about 10,000 sacks, 22,500 bushels of all kinds of grain threshed here this year. Among the best yields was D. S. Hill's oats, which threshed 40 sacks to the acre, and Wm. Piester's barley, 31 sacks to the acre, and wheat for myself that threshed 17 sacks.—Lon Ingram.



Lou Ingram Threshing for Ira Hicks

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That promising part of the earth known as the Higley country consists of approximately 3½ townships near the center of which, on the Arizona Eastern railroad, 25 miles southeast of Phoenix is the townsite of Higley. It is the civic center at this time for about 500 people, living in the Higley district, on land acquired from the government very recently and the sole water supply of which is the pumping plant. This area is situated in the eastern end of the Salt river valley, world famed for its irrigation system and the Roosevelt dam that supplies it, but the Eastern canal, which forms the eastern boundary of the Salt river system, is the western boundary of the Higley section. The altitude of Higley is 1300 feet, 200 feet higher than Phoenix, so that all that has been said and written of the soil, climate and conditions prevailing in the Salt river valley, applies with equal force to Higley, except for the slight difference in altitude and the water supply, and in this respect the people of Higley believe, the man with the pump has a little shade the best of it.

The world has no more ideal climate or better soil conditions for general farming, fruit raising, stock and poultry. To specialize would be to list fifty possible crops and all live-stock.

The postoffice and store were opened in Higley by L. H. Sorey in

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February, 1910, since when he has conducted them successfully and at that time he was the desert outpost and has witnessed the assembling of this community of 500, which cooperates in sending this invitation to the world to come and join them.

The postoffice supplies its patrons through a rural route, many of the settlers have telephones, and the money has been raised for a \$6,000 school house on the townsite, a part of which is platted. A depot and some three or four other buildings constitute the present "town" which in the near future should begin a steady growth as the surrounding country develops.



WHAT SETTLERS SAY.

I have spent the last six years in Higley, engaged in general gardening, poultry raising and the planting of an orchard. No country can produce better turkeys nor more favorable conditions for their culture, and as for my trees from one to four years old, there are none better. Those in bearing could not carry this year's crop to maturity without thinning.

I have eight acres and a \$500 pumping plant throwing 100 gallons a minute, plenty of water for my acreage, or even more if confined to trees.—H. W. Tice.

The orchard, the cut of which appears in this article, was planted January 25, 1911, and that year re-

ceived just one-fourth of one acre foot of irrigating water. During the year 1912 but .46 of an acre foot was applied, and .96 of an acre foot was used in 1913. The photograph was taken when the trees had been in the ground just 32 months. During 1913 most of the trees bore an abundant crop of fruit. In 1914 the water used was increased in amount to meet the needs of larger and full fruiting trees, 1.16 acre feet being applied, the orchard making a satisfactory growth besides bearing a full crop of fruit.

For several years past the writer has been employed by the Department of Agriculture in irrigation investigations and has been in charge of the experimental tract at Higley on which the things mentioned in this article are grown. The tract is irrigated by a pumping plant, the capacity of which is frequently tested by tank measurement, and where necessary weirs are used at distributing points. This is mentioned to show that the amounts of water applied are accurately measured, not estimated.

The needs of 39 varieties of fruit trees, various varieties of vine fruits, forage plants and sugar cane have been studied and experimented on. The result of these years of careful practical investigation has been to prove that large quantities of water are not advisable in, nor necessary for the production of paying crops.

Our Higley district has a wonderful

soil, capable of growing most of the fruits and grains of the temperate and sub-tropical zones. On the experimental tract date palms, oranges, olives, and sugar cane flourish alongside the hardy peach, apricot and plum; while eucalyptus and cottonwood alike find a congenial home, and



Agricultural Experiment Farm
the oleander blooms in the open ground almost the year around.

It is a proven fact that $1\frac{1}{2}$ acre feet of water per annum is abundant for fruit trees, and that the finest and most profitable fruits grow luxuriantly in our soil.—A. L. Hawley.

I have lived in southern California for many years and have been in Ari-

zona almost two years. After fully comparing and investigating the conditions in both states, I find myself the owner of 160 acres of the best land I ever saw, near Higley, Arizona. I installed a 500 gallon per minute pumping plant. I have grown on the acreage basis, successfully and profitably, many things, such as the various kinds of vegetables, cotton, alfalfa, broom corn, etc. I believe the Higley soil and climate are second to none for such crops, as well as deciduous fruits and vines, and many other farm products that I have not personally grown. Water in our district here is very much cheaper than where I have lived in California and we have hardly a one of the tree diseases in Arizona that we had to combat in California.

I am preparing to plant quite an acreage of fruit trees next spring.—
Pernel Barnett.

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I moved on my tract of land 5 miles south and 2 miles east of Higley in the spring of 1915, and installed a 2 h. p. pumping plant and commenced a number of experiments in cultivation. Although we are not farmers, having followed engineering heretofore, we have had very encouraging success in raising Irish potatoes, sweet potatoes, cantaloupes, watermelons, string beans, peas, egg plant, peanuts, chickens and turkeys, and have about 250 young trees growing

nicely. This has been a very dry season, so being able to do all this with a 2 h. p. plant, we feel much encouraged to think what we can do when we get a good sized plant to work with—the increased amount of water it will give us.—L. Y. Woodmansee.

Mr. Woodmansee had only been on his place 7 months when he wrote this article.—L. H. Sorey, Secretary Board of Trade.

The 20 acres of peaches and apricots, the picture of which is herewith exhibited, were planted in February, 1914. The same month we planted 10 acres of alfalfa, cutting in the summer of 1914 five times, the yield being as much as one ton to the acre, per cutting. The first cutting in the spring of 1915 yielded 2 tons per acre, followed by splendid cuttings all summer.

We grew both in 1914 and 1915 very profitably and successfully long staple Egyptian cotton, milo maize, feterita, melons and garden truck.

All our crops are grown on land that was never farmed until 1914. Our pumping plant was not installed until February of that year. It delivers 1100 gallons of water per minute and the main point, without weed seeds, which under the large gravity irrigation projects are brought along with the water and are doing immense damage.

On account of the brush not being

cleared off the land in time for early planting our 1914 crop of cotton was light, yield being $\frac{3}{4}$ bales (375 lbs.) to the acre, which we sold for 21c per pound. This year's crop will be much heavier.

We are now farming 100 acres, but expect to increase our acreage from year to year. We are stocking the entire place with hogs, cattle and brood mares which we have found very profitable.



Germann Orchard—Planted in 1914

The Arizona Eastern railroad has put in a station on the corner of our ranch which is called Germann and which is a great benefit to all who live in this vicinity, as now we do not have to haul our freight $3\frac{1}{2}$ miles from Higley.—The Germann Ranch.

I have lived in the Higley section three years, have erected a 70 h. p. engine and pumping plant and have

successfully grown cotton, alfalfa, barley, wheat, maize and garden, and planted an orchard of five acres of all kinds of deciduous trees except apples and cherries, and have a few citrus trees, all of which are thriving.

Barley with four two-inch irrigations yielded about 20 sacks to the acre and wheat WITHOUT ANY irrigation yielded about 10 sacks. Alfalfa is fine. Have a good pumping plant and plenty of water from an abundant underground supply. As all Higley soil is the best in the valley I am satisfied with natural conditions and human improvements are being perfected as fast as intelligent cooperation of the people can effect them.—H. C. Meyer.

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My three years of practical experimenting, as well as my observation of what others are doing, has satisfied me beyond doubt that we can grow onions, potatoes, cabbage and most other garden vegetables successfully; also milo maize, Mexican June corn, feterita, sorghum, broom corn and kindred grains; also melons of all kinds, sudan grass, spineless cactus, cotton, as well as barley, oats, wheat and alfalfa. However, I am most interested in deciduous fruit growing and am fully satisfied that plums, peaches, apricots and quinces will all do well here. My two-year-old trees of the varieties just named set fruit well this year. It is my belief

Higley, Arizona

Where we Make It Rain When we Need It



Pumping Plant of L. H. Sorey

FACTS VOUCHED FOR BY THE
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